

CLAIMS

I claim:

- 1 1. A liquid fertilizer injector system attached to a
- 2 source of water by a water source line, the system comprising:
- 3 an inlet line adapted for attachment to the water source
- 4 line;
- 5 a holding tank connected to the inlet line;
- 6 a collapsible impermeable bag that is filled with liquid
- 7 fertilizer disposed within the holding tank;
- 8 an outlet line connected between the bag and the water
- 9 source line downstream from the input line;
- 10 a port position indicator valve disposed in the outlet line
- 11 for incrementally controlling the flow of liquid fertilizer from
- 12 the outlet line back to the water source line; and
- 13 a drainage valve to drain and release any input water in
- 14 the holding tank from the liquid fertilizer and injection
- 15 system;
- 16 wherein pressure from water entering the tank from the
- 17 water source line compresses the bag to force liquid fertilizer
- 18 through the output line and into water flowing in the water
- 19 source line for subsequent dispersion.

1 2. The system according to claim 1, wherein the port
2 position indicator valve has a fully closed position, a 3/4ths
3 closed position, a 1/2 closed position, a 1/4th closed position
4 and a fully open position.

1 3. The system according to claim 1, further comprising a
2 combination union connection and injector valve adapted for
3 connection to the water source line, the outlet line being
4 connected to the injection valve.

1 4. The system according to claim 1, wherein the drainage
2 valve has an open position for draining water from the tank.

1 5. A liquid fertilizer injector system attached to a water
2 source line, comprising:

3 an inlet line adapted for connection to the water source
4 line;

5 a mixing tank connected to the inlet line,

6 a feeding chamber connected to the tank, the feeding
7 chamber being adapted for adding liquid fertilizer to the
8 mixing tank for mixing with water from the inlet line;

9 an agitator disposed in the mixing tank;

10 an outlet line connected to the mixing tank and adapted for
11 connection to the water source line downstream from the input
12 line; and

13 a port position indicator valve disposed in the outlet line
14 for incrementally controlling flow of the water and liquid
15 fertilizer mix in the outlet line.

1 6. The system according to claim 5, wherein the port
2 position indicator valve has a fully closed position, a 3/4ths
3 closed position, a 1/2 closed position, a 1/4 closed position
4 and a fully open position.

1 7. The system according to claim 5, further comprising a
2 combination union connection and an injector valve adapted for
3 being disposed in the water source line downstream from the input
4 line, the output line being connected to the injector valve.

1 8. A method for operating a liquid fertilizer injector
2 system using liquid fertilizer with water and a water source,
3 comprising the steps of:

4 receiving the water from the water source;
5 combining the water with the liquid fertilizer from
6 within the liquid fertilizer injection system;
7 distributing the liquid fertilizer;
8 controlling the flow of the liquid fertilizer from the
9 liquid fertilizer injection system; and
10 maintaining the liquid fertilizer injection system as
11 needed.

1 9. The method according to claim 8, wherein combining the
2 water with the liquid fertilizer from within the liquid
3 fertilizer injection system, further comprises the additional
4 step of allowing the water to exert pressure on the liquid
5 fertilizer that is kept in a collapsible impermeable bag within
6 a holding tank.

1 10. The method according to claim 8, wherein controlling
2 the flow of the liquid fertilizer from the liquid fertilizer
3 injection system, further comprises an additional step of using
4 an incremental port position indicator valve for controlling the
5 flow of the liquid fertilizer.

1 11. The method according to claim 8, wherein maintaining
2 the liquid fertilizer injection system as needed, further
3 comprises an additional step of draining any water from the
4 liquid fertilizer injection system when the collapsible
5 impermeable bag is emptied.

1 12. A method for operating a liquid fertilizer injector
2 system using liquid fertilizer with water and a water source,
3 comprising the steps of:

4 receiving the water from the water source;

5 reacting the water with the liquid fertilizer from
6 within the liquid fertilizer injection system;

7 distributing the liquid fertilizer and water;

8 controlling the flow of the liquid fertilizer and
9 water from the liquid fertilizer injection system; and

10 maintaining the liquid fertilizer injection system as
needed.

1 13. The method according to claim 12, wherein combining
2 the water with the liquid fertilizer from within the liquid
3 fertilizer injection system, further comprises an additional
4 step of the water reacting with the liquid fertilizer in an
5 agitated mixing tank.

1 14. The method according to claim 12, wherein controlling
2 the flow of the liquid fertilizer and water from the liquid
3 fertilizer injection system, further comprises an additional
4 step of using an incremental port position indicator valve for
5 controlling the flow of the liquid fertilizer and water.